

(54) FLAME-RETARDING RUBBER COMPOSITION

(11) 5-125229 (A) (43) 21.5.1993 (19) JP
 (21) Appl. No. 3-318562 (22) 7.11.1991
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 (51) Int. Cl.⁵. C08L21/00, C08K3/02, C08L9/02, C08L55/02

PURPOSE: To obtain the title composition having effective flame retardancy without substantially impairing the inherent properties of rubber, lowly smoking when compared with a rubber composition containing a halogen-base flame retardant and being very useful in the fields requiring severe fireproofness, such as industrial products and tires.

CONSTITUTION: The title composition wherein the oxygen index is 19.8-27.5, the flame retardant is red phosphorus, the flame retardant aid is a polymer partially replaced with a nitrile-containing elastomer, and the amount of the flame retardant used is 24wt.% or below.

(54) FLAME-RETARDING RUBBER COMPOSITION FOR TIRE

(11) 5-125230 (A) (43) 21.5.1993 (19) JP
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PURPOSE: To obtain the title composition having an oxygen index in a specified range, lowly smoking and excellent in flame retardancy and mechanical properties by mixing a rubber component with a specified amount of a mixture of red phosphorus with polyacrylonitrile.

CONSTITUTION: A rubber component (A) such as a natural rubber or a polybutadiene rubber is mixed with at most 30wt.% flame retardant (B) comprising red phosphorus and polyacrylonitrile to produce the title composition of an oxygen index of 19.8-27.5. A suitable example of the mixing ratio of component B is such that 1-20wt.% red phosphorus and 2-25wt.% polyacrylonitrile are present based on the rubber composition. Additives such as a reinforcement (e.g. carbon black), a filler, a softener and a vulcanizer may be further added to the above composition. This composition can give a tire having effective flame retardancy and fireproofness without detriment to the other properties.

(54) PRODUCTION OF REGRIND

(11) 5-125232 (A) (43) 21.5.1993 (19) JP
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PURPOSE: To obtain a good regrind by melt-kneading a reclaimable resin composition comprising a polyolefin, a saponified ethylene/vinyl acetate copolymer and a polyolefin modified with an unsaturated carboxylic acid under specified conditions.

CONSTITUTION: A reclaimable resin composition (hereinbelow referred to as S) is kneaded with a polyolefin (APO-2) modified with an unsaturated carboxylic acid and having a melt index higher than that of the polyolefin in S under the conditions satisfying the formula wherein b is the fraction (pt.wt.) of APO-2 separately added to 100 pts.wt. S; B is the concentration (ppm) of the unsaturated carboxylic acid in APO-2; e is the fraction (wt.%) of the saponified ethylene/vinyl acetate copolymer (EVOH) in S; α is the ethylene content (mol%) of EVOH in S; a is the fraction (wt.%) of a polyolefin (APO-1) modified with an unsaturated carboxylic acid in S; and A is the concentration (ppm) of the unsaturated carboxylic acid in APO-1.

$$b \cdot B \geq 52800 \times (e/\alpha)^{1.26} - a \cdot A$$